

1.0 EXECUTIVE SUMMARY

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1.1 PROJECT SUMMARY

EXISTING CONDITIONS

The proposed Seawater Desalination Project at Huntington Beach site is approximately 11 acres in size and would be located adjacent to the Applied Energy Services Corporation (AES) LLC Huntington Beach Generating Station (HBGS), within the southeastern portion of the City of Huntington Beach (City) at 21730 Newland Street. In 2001, AES Huntington Beach, LLC acquired the property from Southern California Edison (SCE). The existing HBGS uses a once through cooling system with an offshore intake and outfall. The site for the proposed desalination facility is situated on an unused fuel oil storage tank area. The storage tank area contains a total of six tanks, ranging in capacity from 924,000 gallons to 8.64 million gallons. Each of these storage tanks is 40 feet high, cylindrical in shape and surrounded by 10 to 15-foot high earthen containment berms, pipelines, pumps, and associated structures. On-site vegetation consists mainly of non-native low-lying shrubs and bushes along the eastern border of the project site. The topography of the site is relatively flat, gently sloping to the southwest, with an elevation of approximately five feet above mean sea level (msl) (refer to Exhibit 5.7-1, *DESALINATION FACILITY SITE PHOTOGRAPHS*). Section 4.0, *EXISTING CONDITIONS*, provides additional information regarding existing conditions and environmental setting.

In addition to the desalination facility site (refer to Exhibit 3-6, *CONCEPTUAL SITE PLAN*), the proposed project will include several related off-site improvements, including pipelines between the existing HBGS ocean intake/outfall lines and the proposed desalination project, up to approximately 10 miles of water delivery pipeline and two underground pump stations. The intake/discharge pipelines would be located entirely within the existing HBGS site and would not require modifications to the coastal/marine portions of the existing HBGS ocean intake/discharge facilities. The water delivery pipeline would be up to approximately 10 miles in length, extending from the proposed desalination facility to the OC-44 water transmission line within the City of Costa Mesa, east of State Route 55 (SR-55) at the intersection of Del Mar Avenue and Elden Avenue. The majority of the pipeline alignment will occur within existing public streets, easements, or other rights-of-way (ROW) in urbanized areas. Although precise pipeline alignments may be modified during final engineering analyses, the conceptual pipeline alignments are shown in Exhibit 3-3, *CONCEPTUAL PIPELINE ALIGNMENTS*. One of the two new off-site underground booster pump stations is proposed to be located within an unincorporated area of the County of Orange, within an existing easement. The other off-site pump station is proposed within the City of Irvine, within a church parking lot in an urbanized area (refer to Exhibit 3-4, *OC-44 BOOSTER PUMP STATION LOCATION MAP* and Exhibit 3-5, *COASTAL JUNCTION BOOSTER PUMP STATION LOCATION MAP*).

PROPOSED PROJECT

The proposed Seawater Desalination Project at Huntington Beach consists of the construction and operation of a 50 million gallon per day (MGD) or 56,000 acre-feet per year (afy) seawater desalination facility by Poseidon Resources Corporation that would provide a supplemental and alternative source of potable water to Orange County. The desalination facility would withdraw source water from the existing HBGS cooling system discharge pipe, purify it utilizing reverse osmosis (RO) technology, discharge concentrated seawater water back to the existing HBGS outfall, to blend with remaining HBGS discharge and deliver potable product water to the distribution system.

Improvements associated with the proposed project would include seawater intake system, pretreatment facilities, the desalination facility utilizing reverse osmosis (RO) technology, post-treatment facilities, product water storage, landscaping, chemical storage, and a booster pump station. Also, the project would require the demolition of three fuel storage tanks and the remediation of any soil/groundwater impacted by contamination associated with previous site usage as a fuel storage facility. In addition, the existing interior berms would be demolished while the existing exterior berms would remain as is. Structures on the desalination facility site would consist of an administration building, a reverse osmosis facility building, pretreatment filter structure, chemical storage/solids handling building, bulk chemical storage building, product water and influent pump stations (situated underground) and surge tank, rinse tank, lime silos, wash water tank, carbon dioxide tanks, ammonia tank, an electrical substation building, an aboveground product water tank, and appurtenant facilities (refer to Exhibit 3-6, *CONCEPTUAL SITE PLAN*).

Off-site improvements include the construction of up to 10 miles of water transmission lines to connect to existing regional transmission and local water distribution systems as described above. The majority of the two pipeline alignments currently being considered are planned for existing public streets, easements, or other rights-of-way, and the alignments are not anticipated to require disturbance of native vegetation or otherwise impact sensitive resources. The proposed alignments consist of a 42- to 48-inch pressure main, and construction would utilize trenchless installation of pipeline in order to traverse waterways and/or roadways with a high sensitivity to traffic disturbance. This topic is further addressed in Section 5.9, *CONSTRUCTION RELATED IMPACTS*. The project would also be conditioned to complete street improvements along the southern side of Edison Avenue (situated north of the subject site).

The off-site underground booster pump stations are needed as part of the distribution system. The first off-site underground booster pump station (the "OC-44" pump station) is proposed to be located within an unincorporated area of the County of Orange along the eastern border of the City of Newport Beach, approximately 1.5 miles south of the University of California, Irvine, within an Orange County Reserve Preservation Easement. The site is located adjacent to, but outside of, a Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) area, approximately ¼ mile north of the San Joaquin Reservoir, where the East Orange County Feeder Number Two and the OC-44 transmission pipelines converge (refer to Exhibit 3-4, *OC-44 BOOSTER PUMP STATION LOCATION MAP*). The OC-44 underground booster pump station would include pumps, a surge tank to protect the distribution system from sudden pressure changes, telemetry equipment, appurtenances, and three diesel powered electrical generators for emergency back-up purposes. This pump station would be placed entirely underground to maintain the natural character of the surrounding resource preservation easement.

The second underground booster pump station (the "Coastal Junction" pump station) would be located in the parking lot at St. Paul's Greek Orthodox Church, at 4949 Alton Parkway within the City of Irvine (refer to Exhibit 3-5, *COASTAL JUNCTION BOOSTER PUMP STATION LOCATION MAP*). The underground pump station would be constructed within the north/northwestern portion of the church parking lot, in an area used for both parking and volleyball activities. The pump station would be entirely underground except for a small pipe vent and a ground-level steel access door for maintenance (the access door would not impede parking after construction). This location is near the connection points of the existing regional water distribution system, Aufdenkamp Transmission Main and the Tri-Cities Transmission Main to the East Orange County Feeder Number Two. The Coastal Junction off-site underground booster pump station would include pumps, telemetry equipment, appurtenances, and one diesel powered electrical generator for emergency back-up purposes. This pump station would be placed entirely underground to maintain the appearance and functionality of the existing parking lot.

1.2 ENVIRONMENTAL SUMMARY

Refer to the following summary of project impacts, mitigation measures, and unavoidable significant impacts.

IMPACT	MITIGATION MEASURE
5.1 LAND USE/RELEVANT PLANNING	
LAND USE <i>The proposed desalination facility is not anticipated to create any impacts to surrounding uses with regards to air quality, noise, aesthetics, hazards and hazardous materials, and short-term construction. Significance: Less than Significant.</i>	None required. However, refer to mitigation measures contained in Section 5.4 (Air Quality), Section 5.5 (Noise), Section 5.7 (Aesthetics/Light & Glare), Section 5.8 (Hazards and Hazardous Materials), and Section 5.9 (Construction Related Impacts).
RELEVANT PLANNING <i>The proposed Seawater Desalination Project at Huntington Beach will be consistent with the City of Huntington Beach General Plan, Zoning and Subdivision Ordinance, SCAG Regional Comprehensive Plan and Guide, and Local Coastal Program, and does not propose to change any General Plan or Zoning designations. Significance: Less than Significant.</i>	None required.
5.2 GEOLOGY, SOILS, & SEISMICITY	
WIND/WATER EROSION <i>Implementation of the proposed desalination project would create adverse impacts in regards to wind and water erosion. Significance: Less than significant with mitigation.</i>	Refer to Mitigation Measure HWQ-1, below.
TOPOGRAPHY <i>No significant landform impacts are anticipated, as the existing project area is relatively flat and contains no unique geological or physical features. Significance: Less than significant.</i>	None required.
GEOLOGY/SOILS <i>The project site's high liquefaction potential and shallow groundwater conditions may create geologic hazards for the proposed desalination facility. Significance: Less than significant with mitigation.</i>	GEO-1 A detailed geotechnical report shall be prepared and submitted with the building permit application for the proposed desalination facility. This analysis shall include on-site soil sampling and laboratory testing of materials to provide detailed recommendations regarding grading, foundations, retaining walls, streets, utilities, remedial work, overexcavation/recompaction, dewatering, water quality, and chemical/fill properties of underground items including buried pipe and concrete and protection thereof. The reports shall specifically address lateral spreading, flood control channel bank stability, liquefaction potential and groundwater constraints. Appropriate recommendations shall be provided to mitigate potentially adverse conditions. The geotechnical report shall also be submitted to the Department of Public Works for review and approval in conjunction with the grading plan.

IMPACT	MITIGATION MEASURE
	<p>GEO-2 In conjunction with the submittal of application for a precise grading permit, the Applicant shall demonstrate to the satisfaction of the City Engineer that the preliminary geotechnical report recommendations have been incorporated into the grading plan unless otherwise specified in the final geotechnical report and/or by the City Engineer.</p> <p>GEO-3 Excavation for the proposed project shall implement dewatering activities in compliance with NPDES regulations. Pumped groundwater shall be sampled, tested, and (if deemed necessary) treated prior to discharge.</p> <p>GEO-4 As native on-site soils are compressible upon placement of structural loads, project implementation shall implement complete removal and recompaction of compressible soils or use of piles and grade beams to support on-site structures.</p> <p>GEO-5 Type V cement shall be used for concrete and buried metal pipes shall utilize special measures (coatings, etc.) to protect against the effects of corrosive soils.</p>
<p>SEISMICITY/FAULTING</p> <p><i>The project area is subject to seismic activity, as it is situated within 1.25 miles of an Alquist-Priolo Earthquake Fault Zone. Significance: Less than significant with mitigation.</i></p>	<p>GEO-6 Due to the potential for ground shaking in a seismic event, the project shall comply with the standards set forth in the UBC (most recent edition) to assure seismic safety to the satisfaction of the Department of Building and Safety prior to issuance of a building permit, including compliance with California Division of Mines and Geology Special Publication 117 (Guidelines for Evaluating and Mitigating Seismic Hazards in California, adopted March 13, 1997). However, given the proximity of the site to the Newport-Inglewood and Compton Blind Thrust Faults, more stringent measures may be warranted.</p> <p>GEO-7 As the South Branch Fault (situated beneath the subject site) is classified as Category C by the City of Huntington Beach General Plan, special studies and subsurface investigation (including a site specific seismic analysis) shall be performed prior to issuance of a grading permit, to the approval of the City Engineer. The subsurface investigation shall include CPT and exploratory borings to determine the fault rupture potential of the South Branch Fault, which underlies the subject site.</p>
<p>LIQUEFACTION POTENTIAL</p> <p><i>The proposed project will be subject to liquefaction hazards, post-liquefaction distress, seismically-induced settlement, and lateral spread, as the project area has a potential for liquefaction. Significance: Less than significant with mitigation.</i></p>	<p>GEO-8 Due to the potential for liquefaction within the project vicinity, the Applicant shall comply with the standards set forth in the UBC (most recent edition) for structures on-site to assure safety of the occupants to the satisfaction of the Department of Building and Safety prior to issuance of a building permit. These standards include compliance with the California Geological Survey Special Publication 117 (Guidelines for Evaluating and Mitigating Seismic Hazards in California, adopted March 13, 1997) and Recommended Procedures for implementation of California Geological</p>

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	<p>Survey Special Publication 117 - Guidelines for Analyzing and Mitigating Liquefaction in California (Dr. Geoffrey R. Martin et al, May 1999).</p> <p>GEO-9 The proposed project shall incorporate adequate measures to stabilize structures from on-site soils known to be prone to liquefaction. Typical methods include, but are not limited to:</p> <ul style="list-style-type: none"> ❖ Over excavation and recompaction of soils; ❖ in-situ soil densification (such as vibro-flotation or vibro-replacement); ❖ injection grouting; and ❖ deep soil mixing. <p>GEO-10 The site specific geotechnical investigation for the proposed project shall analyze the potential for lateral spread on-site. If deemed a possibility, adequate subsurface stabilization practices (similar to those utilized for liquefaction) shall be incorporated prior to the construction of on-site structures.</p>
5.3 HYDROLOGY, DRAINAGE AND STORM WATER RUNOFF	
<p>LONG-TERM WATER QUALITY IMPACTS</p> <p><i>The proposed desalination facility may have hydrology and water quality impacts in regards to flooding and storm water runoff.</i> Significance: Less than significant with mitigation.</p>	<p>HWQ-1 Prior to issuance of a precise grading permit, the applicant shall submit and obtain approval from the City of Huntington Beach of a Water Quality Management Plan (WQMP) specifically identifying Best Management Practices (BMPs) that would be used on-site to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine, structural and non-structural measures specified in the Countywide NPDES Drainage Area Management Plan (DAMP) Appendix which details implementation of the BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities to the applicant, and shall reference the location(s) of structural BMPs. The applicable BMPs include:</p> <ul style="list-style-type: none"> ❖ Plant materials that require fertilization and pest control shall be maintained in accordance with Orange County Management Guidelines for Use of Fertilizers and Pesticides. ❖ BMP structures and facilities shall be cleaned and maintained on a scheduled basis by a Facility Operator appointed person; <p>HWQ-2 Appropriate site specific hydrology and hydraulic analysis will be performed for the project prior to the issuance of grading or building permits, which ever comes first. The analysis shall include mitigation measures, if necessary, in regards to storm water drainage and flooding.</p> <p>HWQ-3 Prior to the issuance of building permits (not including demolition permits) an appropriate on-site drainage system shall be installed for the project that integrates permanent stormwater quality features.</p>

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5.4 AIR QUALITY	
LONG-TERM EMISSIONS <i>The proposed Seawater Desalination Project at Huntington Beach would create long-term air quality emissions impacts through on-site station, off-site mobile, and off-site energy-related emissions. Significance: Less than significant.</i>	None required.
CONSISTENCY WITH REGIONAL PLANS <i>Air quality emissions and related impacts for the proposed project have been accounted for both regionally and locally. Significance: Less than significant.</i>	None required.
SENSITIVE RECEPTORS <i>The proposed project may impact sensitive receptors surrounding the project site in regards to air quality. Significance: Less than significant.</i>	None required. Refer to Section 5.9, <i>CONSTRUCTION RELATED IMPACTS</i> , for a discussion of short-term construction related air quality impacts.
5.5 NOISE	
LONG-TERM STATIONARY NOISE SOURCES <i>The proposed project may have long-term stationary noise impacts on surrounding sensitive receptors. Significance: Less than significant.</i>	NOI-1 Prior to the issuance of any building or grading permits, the Applicant shall prepare an acoustical analysis report and appropriate plans, prepared under the supervision of a City-approved acoustical consultant, describing the stationary noise generation potential and noise mitigation measures (such as the installation of double walls, sound absorbing materials, acoustic barriers, sound control curtains, and sound baffles), if needed, which shall be included in the plans and specifications of the project. All stationary equipment shall be designed to insure that noise levels at the HBGS property line do not exceed the City's Industrial noise standard of 70.0 dBA and will be subject to the approval of the City of Huntington Beach.
5.6 PUBLIC SERVICES AND UTILITIES	
FIRE SERVICE <i>The proposed project could increase demand for fire and emergency services within the City. Significance: Less than significant.</i>	None required.
SCHOOLS <i>The proposed project is not expected to generate the need for additional school facilities, but it may place additional demand on school facilities located within the vicinity of the project area. Significance: Less than significant impacts.</i>	PSU-1 Prior to the issuance of building permits, the applicant will be required to pay applicable school mitigation fees pursuant to State law.

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LIBRARIES <i>The Seawater Desalination Project may increase demand on the City's library system. Significance: Less than significant.</i>	None required.
ROADWAY MAINTENANCE <i>Additional traffic generated by the proposed project may increase demand on streets nearby the project site. Significance: Less than significant with mitigation</i>	PSU-2 The Applicant will be required to pay appropriate traffic impact fees as determined by the City of Huntington Beach Department of Public Works.
PARKS AND RECREATION <i>The desalination project may increase demand on park facilities within the vicinity of the project area. Significance: Less than significant.</i>	None required.
WASTEWATER <i>Implementation of the proposed desalination facility could increase demand on the local wastewater system. Significance: Less than significant with mitigation.</i>	PSU-3 The Applicant will be required to pay five percent of the OCSD connection fee to the City of Huntington Beach.
STORM WATER DRAINAGE <i>The proposed project may increase demand on the local storm water drainage system. Significance: Less than significant impact with mitigation.</i>	None required.
WATER <i>The proposed project's product water may create impacts in regards to water supply. Significance: Less than significant with mitigation.</i>	PSU-4 The Applicant will be required to pay appropriate fees for water service connections, installation, and meters. In addition, the City requires payment of a service fee for industrial customers.
RECLAIMED WATER <i>The project site does not currently utilize reclaimed water, and is not anticipated to utilize reclaimed water in the future. Significance: Less than significant impact.</i>	None required.
SOLID WASTE <i>Project implementation may increase the generation of solid waste, thereby increasing demand on solid waste disposal facilities within the vicinity. Significance: Less than significant with mitigation.</i>	PSU-5 The Applicant will coordinate with the City's recycling representative to ensure that the proposed project is in compliance with the City's waste reduction and recycling program. PSU-6 Prior to the issuance of a grading permit, the Applicant will prepare a waste reduction plan for the generation of construction and operational waste from the proposed project. This plan will be submitted to the recycling coordinator from the City of Huntington Beach who will ensure that AB 939 requirements are properly addressed.

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ELECTRICITY <i>The desalination project may create impacts in regards to increased electricity demand. Significance: Less than significant.</i>	None required.
GAS <i>Existing gas facilities in and surrounding the project area are capable of accommodating additional demand resulting from the proposed project. Significance: Less than significant.</i>	None required.
TELEPHONE AND CABLE <i>Existing telephone and cable facilities in and surrounding the project area are capable of accommodating additional demand resulting from the proposed project. Significance: Less than significant.</i>	None required.
5.7 AESTHETICS/LIGHT & GLARE	
SITE CHARACTER <i>The Seawater Desalination Project at Huntington Beach may alter the site character of the project area, including undeveloped portions of the project area, which would be considered a positive impact to the project area. Significance: Less than significant with mitigation.</i>	ALG-1 For areas visible by adjacent existing or proposed residential areas, exterior mechanical equipment shall be screened from view on all sides, and rooftop mechanical equipment shall be set back 15 feet from the exterior edges of the building. Equipment to be screened includes, but is not limited to, heating, air conditioning, refrigeration equipment, plumbing lines, duct-work and transformers. Said screening shall be architecturally compatible with the building in terms of materials and colors. If screening is not designed specifically into the building, a rooftop mechanical equipment plan showing screening must be submitted for review and approval with the application for building permit(s).
LIGHT AND GLARE <i>The proposed project may generate light and glare through on-site lighting. Significance: Less than significant with mitigation.</i> <i>The proposed project may create additional light and glare through reflective sources. Significance: Less than significant.</i>	ALG-2 If outdoor lighting is included, light intensity shall be limited to that necessary for adequate security and safety. All outside lighting shall be directed to prevent "spillage" onto adjacent properties and shall be shown on the site plan and elevations.
5.8 HAZARDS & HAZARDOUS MATERIALS	
LONG-TERM OPERATIONAL IMPACTS <i>The proposed project may create hazards due to the storage, transportation, and/or handling of hazardous materials, thereby posing a threat to on-site occupants and surrounding uses. Significance: Less than significant.</i>	None required, other than project design implementation of existing regulations and requirements.

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5.9 CONSTRUCTION RELATED IMPACTS	
<p>HYDROLOGY AND WATER QUALITY</p> <p>Proposed project construction may generate erosive conditions including sediment laden storm runoff or dust, which could have adverse impacts in regards to hydrology and water quality. Significance: Less than significant with mitigation.</p>	<p>CON-1 Concurrent with the submittal of the Grading Plan, the Applicant shall submit an Erosion Control Plan to the City of Huntington Beach Department of Public Works which would include the following measures:</p> <ul style="list-style-type: none"> a) Where necessary, temporary and/or permanent erosion control devices, as approved by the Department of Public Works, shall be employed to control erosion and provide safety during the rainy season from October 15th to April 15th. b) Equipment and workers for emergency work shall be made available at all times during the rainy season. Necessary materials shall be available on-site and stockpiled at convenient locations to facilitate the rapid construction of temporary devices when rain is imminent. c) Erosion control devices shall not be moved or modified without the approval of the Department of Public Works. d) All removable erosion protective devices shall be in place at the end of each working day when the 5-day rain probability forecast exceeds 40%. e) After a rainstorm, all silt and debris shall be removed from streets, check berms and basins. f) Graded areas on the permitted area perimeter must drain away from the face of the slopes at the conclusion of each working day. Drainage is to be directed toward desilting facilities. g) The permittee and contractor shall be responsible and shall take necessary precautions to prevent public trespass onto areas where impounded water creates a hazardous condition. h) The permittee and contractor shall inspect the erosion control work and ensure that the work is in accordance with the approved plans. i) Water shall be applied to the site twice daily during grading operations or as otherwise directed by the County of Orange Inspector in compliance with South Coast AQMD rule 403 (Fugitive Dust Emissions). A grading operations plan may be required including watering procedures to minimize dust, and equipment procedures to minimize vehicle emissions from grading equipment. <p>CON-2 Construction of the project shall include Best Management Practices (BMPs) as stated in the Drainage Area Management Plan (DAMP) by the Orange County Stormwater Management Program. BMPs applicable to the project include the following:</p> <ul style="list-style-type: none"> ❖ Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, glues, limes, pesticides, herbicides, wood preservatives and solvents; asbestos fibers, paint flakes, or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator, or

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	<p>battery fluids; fertilizers, vehicle/equipment wash water and concrete wash water; concrete, detergent, or floatable wastes; wastes from any engine/equipment steam cleanings or chemical degreasing; and superchlorinated potable water line rinsings.</p> <p>❖ During construction, disposal of such materials should occur in a specified and controlled temporary area on-site, physically separated from potential stormwater run-off, with ultimate disposal in accordance with local, state, and federal requirements.</p> <p>CON-3 As part of its compliance with the NPDES requirements, the Applicant shall prepare a Notice of Intent (NOI) to be submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Prior to construction, completion of a Storm Water Pollution Prevention Plan (SWPPP) would be required for construction activities on-site. A copy of the SWPPP shall be available and implemented at the construction site at all times.</p> <p>CON-4 Prior to any dewatering activities, the Applicant shall obtain and comply with a general dewatering NPDES permit from the Santa Ana Regional Water Quality Control Board.</p> <p>CON-5 The Applicant shall submit a dewatering plan for review and approval by the Santa Ana Regional Water Quality Control Board and the City of Huntington Beach Department of Public Works. The Applicant would comply with the approved dewatering plan.</p> <p>CON-6 The Applicant shall inform the Orange County Water District (OCWD) of its plans for on-site dewatering, and, if necessary, would acquire necessary permits and approvals from the OCWD to ensure that no adverse impacts on the groundwater basin or seawater intrusion barrier occur as a result of the proposed project. The Applicant would comply with any approved dewatering permits or plans.</p> <p>CON-7 During dewatering operations, a survey program shall be conducted on surrounding properties and structures to ensure that movement or settlement from on-site dewatering operations does not occur. This survey program would be subject to approval by the City Engineer.</p> <p>CON-8 Should on-site dewatering operations require discharge into the sanitary sewer system, the Applicant shall obtain applicable permits and approvals from the Orange County Sanitation District (OCSD) and City of Huntington Beach Department of Public Works. Should the dewatering discharge be directed to existing AES stormdrain facilities, the Applicant shall ensure that dewatering is addressed in the Applicant's SARWQCB NPDES permit.</p>

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<p>AIR QUALITY</p> <p><i>Short-term construction processes for the proposed project would have short-term air quality impacts. Significance: Unavoidable significant impact.</i></p>	<p>CON-9 The project shall comply with SCAQMD Rule 402, which prohibits the discharge from a facility of air pollutants that cause injury, detriment, nuisance, or annoyance to the public or that damage business or property.</p> <p>CON-10 During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular water or other dust preventive measures using the following procedures, as specified in the SCAQMD Rule 403.</p> <ul style="list-style-type: none"> ❖ On-site vehicle speed shall be limited to 25 miles per hour. ❖ All material excavated or graded would be sufficiently watered to prevent excessive amounts of dust. Watering would occur at least twice daily with complete coverage, preferable in the late morning and after work is done for the day. ❖ All material transported on-site or off-site would be either sufficiently watered or securely covered to prevent excessive amounts of dust. ❖ The area disturbed by clearing, grading, earth moving, or excavation operations would be minimized so as to prevent excessive amounts of dust. ❖ These control techniques would be indicated in project specifications. Compliance with the measure would be subject to periodic site inspections by the City. ❖ Visible dust beyond the property line emanating from the project would be prevented to the maximum extent feasible.
<p>NOISE</p> <p><i>Construction processes for the proposed desalination project may generate significant amounts of noise and vibration, impacting adjacent sensitive receptors. Significance: Less than significant with mitigation.</i></p>	<p>CON-11 Prior to the issuance of any grading permits, the Applicant shall ensure evidence acceptable to the City of Huntington Beach Department of Planning and Public Works that:</p> <ul style="list-style-type: none"> ❖ All construction vehicles or equipment, fixed or mobile, operated within 1,000 feet of a dwelling shall be equipped with properly operating and maintained mufflers; ❖ All operations shall comply with the City of Huntington Beach Municipal Code Chapter 8.40 (Noise Control); ❖ Stockpiling and/or vehicle staging areas shall be located as far as practicable from residential areas; and ❖ Notations in the above format, appropriately numbered and included with other notations on the front sheet of grading plans, would be considered as adequate evidence of compliance with this condition.

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	<p>CON-12 Should the project require off-site import/export of fill material during demolition, remediation, and construction, trucks shall utilize a route that is least disruptive to sensitive receptors, preferably Newland Street to Pacific Coast Highway to Beach Boulevard to I-405. Construction trucks shall be prohibited from operating on Saturdays, Sundays and federal holidays.</p> <p>CON-13 To reduce project-related construction noise impacts generated by the proposed project, the following conditions shall be implemented:</p> <ul style="list-style-type: none"> ❖ Construction activities shall be limited to hours specified by the City Noise Ordinance; and ❖ Unnecessary idling of internal combustion engines shall be prohibited.
<p>PUBLIC SERVICES AND UTILITIES</p> <p><i>Project implementation may create an increase demand for public services and utilities. Significance: Less than significant.</i></p> <p><i>Project implementation may conflict with underground utilities along the proposed pipeline alignment. Significance: Less than significant with mitigation.</i></p>	<p>CON-14 Unless underground utility locations are well documented, as determined by the City of Huntington Beach Public Works Department, the project engineer shall perform geophysical surveys to identify subsurface utilities and structures, the findings of which shall be incorporated into site design. Pipelines or conduits which may be encountered within the excavation and graded areas shall either be relocated or be cut and plugged according to the applicable code requirements.</p>
<p>AESTHETICS/LIGHT & GLARE</p> <p><i>Project-related construction may adversely impact views of and across the proposed project site through debris, equipment, and truck traffic. Significance: Less than significant with mitigation.</i></p>	<p>CON-15 During construction, a security fence, the height of which shall be determined by the City of Huntington Beach Department of Building and Safety, shall be installed around the perimeter of the site. The construction site shall be kept clear of all trash, weeds, etc.</p> <p>CON-16 Construction activities, to the extent feasible, shall be concentrated away from adjacent residential areas. Equipment storage and soil stockpiling shall be at least 100 feet away from adjacent residential property lines.</p>
<p>HAZARDS AND HAZARDOUS MATERIALS</p> <p><i>Project implementation may pose a risk to on-site workers and adjacent land uses with regards to short-term construction related hazards and hazardous materials. Significance: Less than significant with mitigation.</i></p>	<p>CON-17 Prior to excavation of the contaminated and other areas for rough grading, the project site shall be cleared of all excess vegetation, surface trash, piping, debris and other deleterious materials. These materials shall be removed and disposed of properly (recycled if possible).</p> <p>CON-18 Proper excavation procedures shall be followed to comply with OSHA's Safety and Health Standards. If applicable, the South Coast Air Quality Management District (SCAQMD) Rule 1166 permit shall be</p>

IMPACT	MITIGATION MEASURE
	<p>obtained prior to the commencement of excavation and remedial activities.</p> <p>CON-19 The contractor shall follow all recommendations contained within the adopted Remedial Action Plan for the project site.</p> <p>CON-20 If asbestos or lead-based paints are identified in any on-site structures, the contractor shall obtain a qualified contractor to survey the project site and assess the potential hazard. The contractor shall contact the SCAQMD and the City of Huntington Beach Departments of Planning, Building and Safety, and Fire prior to asbestos/lead paint removal.</p> <p>CON-21 If any hazardous materials not previously addressed in the mitigation measures contained herein are identified and/or released to the environment at any point during the site cleanup process, operations in that area shall cease immediately. At the earliest possible time, the contractor shall notify the City of Huntington Beach Fire Department of any such findings. Upon notification of the appropriate agencies, a course of action would be determined subject to the approval of the by the City of Huntington Beach Department of Public Works.</p> <p>CON-22 All structures must be cleaned of hazardous materials prior to off-site transportation, or hauled off-site as a waste in accordance with applicable regulations.</p> <p>CON-23 Structure removal operations shall comply with all regulations and standards of the SCAQMD.</p> <p>CON-24 The contractor shall post signs prior to commencing remediation, alerting the public to the site cleanup operations in progress. The size, wording and placement of these signs shall be reviewed and approved by the City of Huntington Beach Departments of Planning and Public Works.</p> <p>CON-25 Any unrecorded or unknown wells uncovered during the excavation or grading process shall be immediately reported to and coordinated with the City of Huntington Beach Fire Department and State Division of Oil, Gas, and Geothermal Resources (DOGGR).</p> <p>CON-26 During remediation, if any soil were found to be hazardous due to contamination other than petroleum hydrocarbons, it would be segregated, stockpiled, and handled separately.</p> <p>CON-27 Dust and volatile organic emissions from excavation activities shall be controlled through water spray or by employing other approved vapor suppressants including hydromulch spray in accordance with Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements and the South Coast Air Quality Management District (SCAQMD) permit conditions.</p>

IMPACT	MITIGATION MEASURE
	<p>CON-28 Prior to the excavation process for pipeline construction, the contractor shall coordinate with the County of Orange's Integrated Waste Management Department in order to ensure that proposed pipeline construction does not impact drainage of the former Cannery Street Landfill.</p> <p>CON-29 Methane mitigation features would be consistent with the requirements of the City of Huntington Beach Specification Number 429 and other applicable state and federal regulations. The methane mitigation features shall be submitted for review and approval to the Orange County Health Care Agency (OCHCA), Environmental Health Division.</p> <p>CON-30 Studies to evaluate the potential for landfill gas (LFG) generation and migration would be completed prior to implementation of the proposed water delivery component of the project. Appropriate mitigation measures would be coordinated with the South Coast Air Quality Management District, Solid Waste Local Enforcement Agency, Regional Water Quality Control Board, and the City of Huntington Beach Fire Department. Mitigation measures could entail active or passive extraction of LFG to control surface and off-site migration and passive barriers with vent layers and alarm systems below trenches and within 1,000 feet of the former Cannery Street Landfill boundary. A comprehensive monitoring network would be established along the pipeline alignment adjacent to the landfill. Periodic monitoring of the monitoring network would be performed.</p>
<p>TRAFFIC</p> <p><i>Short-term project construction (of both on-site and off-site elements) could potentially create impacts in regards to traffic. Significance: Less than significant with mitigation.</i></p>	<p>CON-31 A Traffic Management Plan (TMP) shall be prepared and implemented to the satisfaction of the affected jurisdiction within which the facilities are to be constructed when the facilities are to be located where construction would affect roadways. The TMP shall include, but not be limited to, the following measures:</p> <ul style="list-style-type: none"> ❖ Limit construction to one side of the road or out of the roadbed where possible; ❖ Provision of continued access to commercial and residential properties adjacent to construction sites; ❖ Provide alternate bicycle routes and pedestrian paths where existing paths/ routes are disrupted by construction activities, if any; ❖ Submit a truck routing plan, for approval by the City of Huntington Beach, County, and other responsible public agencies in order to minimize impacts from truck traffic during material delivery and disposal; ❖ Where construction is proposed for two-lane roadways, confine construction to one-half of

IMPACT	MITIGATION MEASURE
	<p>the pavement width. Establish one lane of traffic on the other half of the roadway using appropriate construction signage and flagmen, or submit a detour plan for approval by the City Traffic Engineer;</p> <ul style="list-style-type: none"> ❖ The Traffic Management Plan shall be approved by affected agencies at least two weeks prior to construction. Per Caltrans requirements, the applicant shall submit the Traffic Management Plan to Caltrans at the 90-percent design phase; ❖ Construction activities shall, to the extent feasible, be coordinated with other construction activity taking place in the affected area(s); and ❖ Provide for temporary parking, where necessary, during installation of pipelines within the AES site. <p>CON-32 Prior to initiating the removal of structures and contaminated materials, the contractor must provide evidence that the removal of materials would be subject to a traffic control plan, for review and approval by the by the City of Huntington Beach Department of Public Works. The intent of this measure is to minimize the time period and disruption of heavy duty trucks.</p> <p>CON-33 Construction related activities would be subject to, and comply with, standard street use requirements imposed by the City of Huntington Beach, County and other public agencies, including the use of flagmen to assist with haul truck ingress and egress of construction areas and limiting the large size vehicles to off-peak commute traffic periods.</p> <p>CON-34 The Contractor shall obtain the necessary right-of-way encroachment permits and satisfy all permit requirements. Nighttime construction may be performed in congested areas. Also, any nighttime construction activities shall have prior approval by the City of Huntington Beach Department of Public Works.</p> <p>CON-35 During periods of heavy equipment access or truck hauling, the Contractor would provide construction traffic signage and a construction traffic flagman to control construction and general project traffic at points of ingress and egress and along roadways that require a lane closure.</p> <p>CON-36 The Applicant shall coordinate with the Department of Public Works, Traffic Engineering Division in developing a truck and construction vehicle routing plan. This plan shall include the approximate number of truck trips and the proposed truck haul routes. It shall specify the hours in which transport activities can occur and methods to mitigate construction related impacts to adjacent residents and the surrounding area. The plan shall take into</p>

IMPACT	MITIGATION MEASURE
	consideration any street improvement construction occurring in the vicinity. These plans must be submitted for approval to the Department of Public Works.
<p>BIOLOGICAL RESOURCES</p> <p><i>Construction of the proposed project may result in impacts to sensitive biological resources. Significance: Less than significant with mitigation.</i></p>	<p>CON-37 Prior to construction on the proposed OC-44 booster pump station site, three focused coastal California gnatcatcher surveys shall be performed for the site in accordance with USFWS protocols, preferably during the gnatcatcher breeding season. Should the species be observed on or adjacent to the site, consultation and permitting through the USFWS would be required.</p> <p>CON-38 Prior to construction on the proposed OC-44 booster pump station site, eight focused least Bell's vireo surveys shall be performed for the off-site underground booster pump station (at least 10 days apart during the vireo nesting season of April and July) in accordance with USFWS protocols. Should the species be observed on or adjacent to the site, consultation and permitting through the USFWS would be required. This measure may not be necessary if construction phasing can avoid the vireo nesting season.</p> <p>CON-39 Prior to construction on the proposed OC-44 booster pump station, a qualified biologist shall perform a habitat assessment for the southwestern pond turtle at the pump station site. If habitat for this species is observed, a trapping program would be implemented to determine the presence or absence of these species. If present, pond turtles must be trapped and relocated prior to the start of construction.</p> <p>CON-40 A survey for active raptor nests shall be performed by a qualified biologist 30 days prior to the commencement of construction activities on the OC-44 proposed booster pump station site. Any occupied nests discovered during survey efforts shall be mapped on construction plans for the site. If recommended by the biologist, restrictions on construction activities may be required in the vicinity of the nest until the nest is no longer active.</p> <p>CON-41 Prior to the commencement of any directional boring for water conveyance pipeline implementation, the applicant shall prepare a Frac-Out Contingency Plan. The plan shall establish criteria under which a bore would be shut down (e.g., loss of pressure, loss of a certain amount of returns) and the number of times a single bore should be allowed to frac-out before the bore is shut down and reevaluated. It would also clearly state what measures would be taken to seal previous frac-outs that have occurred on a given bore to ensure that it does not become the path of least resistance for subsequent frac-outs. Additionally, the site-specific Frac-Out Contingency Plan would be prepared and reviewed by the City Engineer and</p>

IMPACT	MITIGATION MEASURE
	<p>appropriate resource agencies prior to each major bore.</p> <p>CON-42 In order to minimize potential construction impacts to nesting savannah sparrows adjacent to the proposed desalination facility, a pre-construction nesting survey would be performed by a qualified biologist in consultation with applicable regulatory agencies. Should nesting savannah sparrows be found, adequate mitigation (such as relocation, construction noise abatement measures, etc.) would be implemented as appropriate based on the findings of the pre-construction survey.</p> <p>CON-43 All focused surveys for sensitive biological resources performed prior to proposed project implementation shall include a review of data within the California Natural Diversity Data Base (CNDDB) to obtain current information on any previously reported sensitive species/habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.</p> <p>CON-44 Prior to implementation of the proposed off-site OC-44 booster pump station adjacent to the NCCP/HCP boundary, a jurisdictional delineation of the proposed pump station site shall be performed to determine the extent of jurisdictional area, if any, as part of the regulatory permitting process.</p>
<p>CULTURAL RESOURCES</p> <p><i>Construction of the proposed project may result in impacts to cultural resources. Significance: Less than significant with mitigation.</i></p>	<p>CON-45 Should buried historical/archaeological resources be discovered during excavation on the proposed OC-44 booster pump station site, all construction work in that area shall be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.</p> <p>CON-46 During excavation of five feet below ground surface or lower on the OC-44 proposed booster pump station site, a paleontological resource recovery program for Miocene invertebrate fossils shall be implemented. This program shall include, but would not be limited to, the following:</p> <ul style="list-style-type: none"> ❖ Monitoring of excavation in areas identified as likely to contain paleontologic resources by a qualified paleontologic monitor. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments, which are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if the potentially fossiliferous units described herein are not encountered, or upon exposure are

IMPACT	MITIGATION MEASURE
	<p>determined following examination by qualified paleontologic personnel to have low potential to contain fossil resources;</p> <ul style="list-style-type: none"> ❖ Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates; ❖ Identification and curation of specimens into a museum repository with permanent retrievable storage. The paleontologist should have a written repository agreement in hand prior to the initiation of mitigation activities; and ❖ Preparation of a report of findings with appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency, would signify completion of the program to mitigate impacts to paleontologic resources. <p>CON-47 A qualified paleontologist shall be retained to monitor grading operations at the proposed desalination facility site, and, if necessary, to salvage scientifically significant fossil remains. The paleontologist shall have the authority to temporarily divert or direct grading efforts to allow evaluation and any salvage of exposed fossils.</p>
5.10 OCEAN WATER QUALITY AND MARINE BIOLOGICAL RESOURCES	
<p>OCEAN WATER QUALITY</p> <p><i>The proposed project may adversely impact ocean water quality in the vicinity of the HBGS outfall. Significance: Less than significant.</i></p>	None required.
<p>MARINE BIOLOGICAL RESOURCES</p> <p><i>The proposed project may have adverse impacts upon marine biological resources in the vicinity of the HBGS outfall. Significance: Less than significant.</i></p>	None required.
5.11 PRODUCT WATER QUALITY	
<p>PRODUCT WATER QUALITY</p> <p><i>The proposed project may create impacts due to the quality of potable water produced by the desalination process. Significance: Less than significant with mitigation.</i></p>	<p>PW-1 Prior to project operations, the applicant shall obtain all required drinking water permits from the California Department of Health Services. These permits are anticipated to consist of:</p> <ul style="list-style-type: none"> ❖ A Wholesale Drinking Water Permit; and ❖ An Administrative Change to Retail Agencies' Drinking Water Permit (to include desalinated water from the proposed project as an approved source of supply for their agency).

IMPACT	MITIGATION MEASURE
	<p>PW-2 During final design of the proposed project, the applicant shall incorporate the following six provisions to protect water quality in the event of "non-routine" operations at the HBGS (defined as operations such as seawater emergency intake pump shut downs and failures, electricity equipment malfunctions, excessively high temperature of the cooling water, etc.):</p> <ul style="list-style-type: none"> ❖ <u>Automatic control interlock between HBGS pumps and desalination facility intake pumps:</u> The shutdown controls of the desalination facility intake pumps shall be interlocked with the HBGS pumps, so when HBGS pump operation is discontinued to prepare for heat treatment, non-routine or even routine pump shutdown, this would automatically trigger an alarm at the desalination facility along with shutdown of the desalination intake pumps. After this emergency shutdown, the intake pumps shall be started up manually, and the operations staff would be required to check the reason of shutdown with the HBGS staff before restarting the treatment facility intake pumps. ❖ <u>Continuous Intake Pump Flow Measurement Devices:</u> Seawater intake pumps shall be equipped with flowmeters, which would record the pumped flow continuously. If the intake flow is discontinued for any reason, including non-routine HBGS operations, automatic intake pump shutdown shall occur. ❖ <u>Continuous Intake Water Temperature Measurement Devices:</u> The desalination facility intake pump station shall be equipped with instrumentation for continuous measurement of the intake temperature. Any fluctuations of the intake temperature outside preset normal limits shall trigger alarm and intake pump shutdown. This monitoring equipment shall provide additional protection against heat treatment or other unusual intake water quality conditions. ❖ <u>Continuous Intake Water Salinity/Conductivity Measurement Devices:</u> The desalination facility intake pump station shall be equipped with instrumentation for continuous measurement of the intake seawater salinity. Any fluctuations of the intake salinity outside preset normal operational limits shall trigger an alarm and initiate intake pump shutdown. This monitoring equipment shall provide additional protection against discharge of unusual fresh water/surface water streams in the facility outfall. ❖ <u>Continuous Intake Water Oil Spill/Leak Detection Monitoring Devices:</u> The desalination facility intake pump station shall be equipped with instrumentation for oil spill/leak detection. Detection of oil in the intake water even in concentrations lower than 0.5 mg/L shall automatically trigger an alarm and initiate intake pump shutdown. This monitoring equipment shall provide additional protection against unusual intake water quality conditions.

IMPACT	MITIGATION MEASURE
	<p>❖ <u>Routine Communication with HBGS Staff:</u> The desalination facility staff of each shift shall be required to contact HBGS personnel at least once per shift and enquire about unusual planned or unplanned events at the HBGS. If non-routine operations are planned at the HBGS, the desalination facility shall modify desalination facility operations accordingly.</p> <p>PW-3 During project operations, the RO membrane system shall be continuously monitored for feed seawater and permeate conductivity and the differential pressure through the membranes. If permeate salinity (i.e. total dissolved solids) concentration exceeds the design level, membranes shall be cleaned to recover their original performance capabilities.</p>
<p>PRODUCT WATER RELIABILITY</p> <p><i>The reliability of product water at the Seawater Desalination Project at Huntington Beach may be adversely impacted by emergency conditions such as seismic events. Significance: Less than significant with mitigation.</i></p>	<p>PW-4 Prior to project operations, the desalination facility operations staff shall develop an earthquake mitigation and preparedness plan, which shall be coordinated with the City of Huntington Beach. This plan shall define coordination measures to assure continuous plant operations and water delivery under earthquake emergency conditions.</p>
<p>ORANGE COUNTY WATER DISTRIBUTION SYSTEM</p> <p><i>The proposed desalinated product water may have adverse impacts upon the existing Orange County water distribution system. Significance: Less than significant with mitigation.</i></p>	<p>PW-5 Prior to project operations, a corrosion monitoring system shall be installed in the proposed transmission pipeline at points of interconnection with the existing water distribution system to ensure that the proposed corrosion control measures are effective and adequate.</p> <p>PW-6 To protect against potential taste and odor problems associated with the startup of facility operations, a sequential rinsing program shall be initiated just prior to project startup that shall be coordinated with the involved water agencies to minimize any sediment disturbance that might occur due to flow reversal in a portion of the existing distribution system.</p> <p>PW-7 Prior to project operations, a sampling location shall be established near the physical connection of the transmission pipeline to the OC-44 feeder. A monitoring program shall be implemented for this location incorporating the following parameters: coliform bacteria, heterotrophic bacteria, chlorine residual, disinfection byproducts, and aesthetic parameters such as turbidity, odor, and color, as well as corrosion indices.</p> <p>PW-8 Prior to project operations, additional modeling shall be performed to confirm that the proposed project shall not have pressure surge impacts upon the existing regional water distribution system. The model shall recommend appropriate facilities to prevent pressure surges, such as</p> <p>❖ Incorporation of pressurized surge tanks at booster pump station locations;</p>

IMPACT	MITIGATION MEASURE
	<ul style="list-style-type: none">❖ Vacuum relief and air release valve improvements;❖ Hydraulically operated isolation valves;❖ Elimination of existing valves; and/or❖ Pressure control valve improvements.
	PW-9 Prior to project operations, the applicant shall coordinate with and obtain approval as required from applicable local water agencies that own and operate the distribution system in which the desalinated water would come in contact with. Various operating approvals and corresponding agreements shall be signed before the desalinated water is introduced into the local distribution system.

UNAVOIDABLE SIGNIFICANT IMPACTS

AIR QUALITY

Even after implementation of mitigation measures, the proposed desalination project may have unavoidable significant impacts in regards to temporary, short-term emissions for NO_x. However, impacts in this regard have been adequately analyzed within the City's General Plan EIR, as the project will be consistent with all General Plan and zoning designations. No other unavoidable significant impacts have been identified for the Seawater Desalination Project at Huntington Beach.

1.3 SUMMARY OF PROJECT ALTERNATIVES

"NO PROJECT" ALTERNATIVE

None of the impacts associated with the proposed development and construction activities would occur if the "No Project" alternative were selected. Implementation of this alternative would leave the existing portion of the fuel oil storage facility, proposed pipeline alignment, and proposed underground booster pump station sites in place, and would avoid any adverse physical or environmental impacts associated with the proposed project. Existing geologic, soils, and aesthetic conditions in the area would remain the same. Air quality, noise, and traffic impacts due to construction of the desalination facility, pipeline, and pump stations would not occur with the "No Project" alternative.

The "No Project" alternative is not presently being considered because it fails to meet the basic project objectives. In addition, the existing project site degrades the aesthetic character of the vicinity and, if not remediated as proposed, may pose a significant health risk due to petroleum hydrocarbon contamination. Furthermore, the "No Project" alternative would not realize the project benefit of providing a "drought proof," high quality, new potable water supply.

"ALTERNATIVE SITE" ALTERNATIVE

An alternative site (formerly the proposed project site within Initial Study prepared for the previously circulated EIR, dated May 17, 2001) for the desalination facility is located southwest of the current project site, within the HBGS, with HBGS office buildings to the west, an electrical switchyard to the north, and fuel oil storage tanks to the east. The alternative site is located within approximately 300 feet of the proposed project site, closer to the residential uses to the west. Project operation and equipment would be similar as with the project. However, the primary constraint for this site that led

to its rejection is potentially significant temporary and permanent disruption to HBGS parking, access and operational activities, as the site is located immediately adjacent to the generating units and would displace existing parking, access areas and buildings. In addition, due to the site constraints that would be placed on HBGS from this alternative, it may preclude the power plant from converting to gas turbine combined cycle operation in the future. As such, this alternative site is not considered feasible.

Several other locations outside of the City of Huntington Beach have also been considered for this project, including the mouth of San Juan Creek (within the City of Dana Point), San Onofre (within San Diego County), and along the coast of the City of San Clemente (refer to Exhibit 7-1, *ALTERNATIVE SITE LOCATION MAP*, and Table 7-3, *ALTERNATIVE SITE COMPARISON*). These alternatives are not being considered for a variety of reasons, such as environmental concerns of a new ocean intake/discharge system (San Clemente) and/or engineering/acquisition issues (San Onofre).

"ALTERNATIVE OWNERSHIP" ALTERNATIVE

The "Alternative Ownership" alternative would not change any of the design or operational features of the project. Rather, this alternative consists of the exact same project owned and operated by a public entity. The project proponent, a private entity, has already obtained lease rights to the site through negotiations with the current land owner (AES Huntington Beach, LLC). For this alternative to be feasible, a public entity would first need to negotiate with the applicant or otherwise obtain lease rights to the site. Assuming that lease rights of the site were acquired by a public entity, this alternative would result in the same environmental impacts as the proposed project (under private ownership). Consequently, the "Alternative Ownership" alternative and the project as proposed would result in the same potential impacts on the environment.

"ALTERNATIVE PROJECT DESIGN" ALTERNATIVE

The "Alternative Project Design" Alternative would incorporate a different method of desalination (such as multi-effect distillation, or MED) or an alternative seawater intake collection system (such as vertical wells, Ranney wells, infiltration galleries, and seabed infiltration systems). The MED alternative is infeasible due to the extreme height required for operation of the vertical tubes (300 feet) and the dependency on an electrical power plant for generation of steam. Alternative intake methods are infeasible primarily due to the number of vertical/Ranney wells necessary for a 50 mgd project (at least 24 individual wells), and the area of disruption necessary for an infiltration gallery or seabed infiltration system.

An alternative discharge location (the Orange County Sanitation District [OCSD] outfall) was also analyzed as an alternative. This alternative is also rejected, since OCSD has indicated that they do not have the capacity to accommodate the waste stream from the proposed desalination project.

"REDUCED FACILITY SIZE" ALTERNATIVE

The proposed desalination project is currently designed to incorporate reverse osmosis (RO) technology to remove impurities from seawater to produce approximately 50 mgd (56,000 AFY) of potable water for distribution to local water agencies. One alternative to the proposed project would be to reduce the output of project water to approximately 25 mgd. The design and operation of the proposed desalination facility would generally remain the same. However, this alternative would reduce the size of the facility, the amount of seawater required to produce water, and the amount of concentrated seawater discharged back into the HBGS outfall.

The 25 mgd alternative would not significantly reduce potential environmental impacts when compared to the proposed project. In addition, this alternative would result in a substantial decrease

in the amount of desalinated water that could be produced, and thus a substantial increase in the cost of the desalinated water. Consequently, the 25 mgd alternative would not achieve the project objectives to provide a sufficient amount of water that would meet the future water needs projected by Orange County water purveyors, and would reduce overall water supply reliability that is sustainable and independent of climatic conditions.

While the Reduced Facility Size alternative may result in slightly reduced impacts in comparison to the proposed project, the 25 mgd alternative would result in providing water at a cost that would not be acceptable to Orange County water purveyors, and would not produce a sufficient amount of desalinated water to meet projected future demand. Implementation of the 25 mgd alternative would not avoid the project's identified unavoidable construction related air quality impact, and would reduce the water quality benefits of the project as proposed. As such, this alternative is not presently under consideration.

"ENVIRONMENTALLY SUPERIOR" ALTERNATIVE

None of the above alternatives are considered "environmentally superior" to the proposed project, except for the "No Project" Alternative. In this case, CEQA requires identification of an "environmentally superior" alternative from among the other alternatives. Implementation of the project on an alternative site, while dependent on site-specific variables, is not anticipated to significantly reduce impacts, as alternative site implementation is expected to result in overall similar or greater environmental impacts. The "Alternative Ownership" alternative would result in the same environmental impacts as the proposed project. A hypothetical reduction in facility size can be argued to be "environmentally superior", based on the reduction in facility size and corresponding reduction in traffic, air and noise impacts. However, reducing facility size and output would not substantially reduce any significant impacts. The other alternative project design alternatives (alternative desalination methods and alternative intake facilities), while offering some environmental benefits, result in greater environmental impacts overall. Consequently, and in accordance with the mandate of CEQA, the "Alternative Project Design – Reduced Facility Size" alternative is identified as the environmentally superior alternative in comparison to the proposed project.

1.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Section 5.0 includes a detailed discussion of environmental impacts associated with the proposed project. Section 6.0 includes a discussion of the long-term implications of the proposed project. These issues have been the subject of extensive public hearings, study sessions, and public testimony before both the Planning Commission and City Council of the City of Huntington Beach. Several areas of controversy were identified and addressed through the public hearings and responsive informational disclosure. Three predominant subject areas of public controversy were identified by the City Council, and as a result, this Draft Recirculated EIR includes updated information and analysis of the following:

- 1) Impingement and entrainment impacts of the currently permitted once through cooling water system of HBGS and the potential impingement and entrainment impacts that may be caused by the proposed project;
- 2) Potential growth-inducing impacts of the proposed project; and
- 3) Compatibility of the desalination facility's product water with existing potable water supplies delivered through the regional water distribution system.

The selection of a specific pipeline alignment can be characterized as an issue to be resolved. This Draft EIR has evaluated several pipeline alignment alternatives, in sufficient detail to allow implementation of any of the identified alternatives. As part of typical refined analyses that occur in final design, variations to these alternatives may be developed. City staff has the discretion to

determine whether or not this EIR adequately addresses future project plans, pursuant to CEQA Guidelines Section 15162.